

North American Drought Monitor – November 2005

Canada: Much of British Columbia reported well below average November precipitation. The snow water equivalent measured at most automated snow pillow locations was below or well below average at the end of the month, with only two stations recording above average.

Most of Alberta received below average November precipitation with a narrow band of near average amounts extending from the southwest corner through central Alberta. In the plains region, monthly precipitation amounts ranged from 30 mm in parts of the southwest to less than 5 mm in the northeast and much of the northern Peace Region. This translated to less than 25% of average precipitation for the month across most of the north. Most stations north of Edmonton recorded less than 60% of average from September 1st to November 30th. Dry meteorological conditions expanded the areas classified as abnormally dry (D0) and moderate drought (D1), although there were no reported impacts due to drought. On-farm water and livestock feed were reported to be in good supply for the winter. Snow accumulations in the eastern Rocky Mountains ranged from well below average in the far south to near or above average in central areas, including the Bow River and Red Deer River basins. No measurements were taken in the northern Alberta Rockies at the end of November. Southern Saskatchewan and Manitoba generally received above average November precipitation, eliminating the abnormally dry (D0) area that appeared at the end of October. Northern areas generally received well below average precipitation amounts with the exception of the far northeast, which reported well above average. From September 1st to November 30th, a broad area from southwestern Alberta to northeastern Manitoba received above average precipitation while southeastern Saskatchewan and southern Manitoba received below average accumulated amounts.

Most stations in northern Ontario recorded above average November precipitation. Most streamflow stations reported near average flow levels at the end of the month using the criteria defined by the Ontario Ministry of Natural Resources. Southern Ontario generally received near average November precipitation, with some stations near Lake Huron in the southwest recording well below average amounts. Above average precipitation amounts around Georgian Bay reduced the extent of the abnormally dry (D0) area. Several streamflow stations in southern Ontario reported below 50% of average using the criteria defined by the Ontario Ministry of Natural Resources. The Great Lakes basin received 150% of average precipitation for November, causing the lakes to decline by less than their usual amounts for the month. Only Lake Ontario remains above average for the time of year.

The province of Quebec generally received above average November precipitation. Most stations were also near or above average from September 1st to November 30th, with only a few stations recording below 100% of average for the period.

New Brunswick, Nova Scotia and Prince Edward Island generally received above average monthly precipitation and recorded well above average accumulated amounts

since September 1st. Newfoundland received below average amounts in the south and west, with a pocket of well above average precipitation in the northeast. Accumulated amounts since September 1st generally remained near average.

United States: November was drier than normal across a broad swath of the country from the Southwest to the southern Plains, with 13 percent of the contiguous U.S. very dry (in the bottom 10th percentile of the historical record). Parts of the Southeast, Midwest, and northern High Plains were also drier than normal. Areas of the Pacific Northwest, which have been experiencing long-term drought for the last several years, received above normal precipitation this month. The November precipitation pattern at the primary stations in Alaska was drier than average in the central to southwestern parts of the state, and wetter than normal along the northern coast. November was wetter than average in southeastern Alaska where multi-month dryness (D0) persisted. Across Hawaii, the precipitation pattern was mostly drier than average, with areas of multi-month dryness (D0) persisting. Based on preliminary data, the nation had the ninth warmest November in the 1895 to present record, which kept evapotranspiration and related water demand above the seasonally decreasing norms.

The November wetness in the Pacific Northwest and northern Rockies resulted in the elimination of D3 and the contraction of D2, D1, and D0 areas in the region, but drought expanded in the central part of the country. About 18 percent of the contiguous U.S. fell in the moderate to extreme drought categories (based on the Palmer Drought Index) at the end of November. The drought areas included much of the interior Pacific Northwest and parts of the Rocky Mountain states, central and southern High Plains, the Ohio and Lower Mississippi valleys, central North Carolina, and western Great Lakes. Severe to extreme drought expanded across the southern Plains and persisted in the Midwest centered in northern Illinois. An area of abnormally dry D0 was added to central California. D0 contracted across parts of the Southeast and the central Great Lakes region.

Record or near-record dry conditions were reported at stations in Illinois. Both Chicago and Rockford recorded the driest 9-month spring-summer-fall period on record this year, with the Northwest and Northeast Illinois climate divisions also having the driest March-November in the 111-year record. In addition, it was the driest March-November in 111 years for the Arklatex region (the area bounded by southwestern Arkansas, southeastern Oklahoma, and northeastern Texas). The areas around northern Illinois and the Arklatex comprised the only D3 extreme drought areas on the map this month.

November was extremely dry for parts of Oklahoma, especially the central sections where Oklahoma City tied the record for driest November. Governor Brad Henry issued a statewide burning ban on the 15th, with several large wildfires burning in the state near the end of the month. Governor Henry subsequently asked the U.S. Department of Agriculture to expand a previously issued disaster designation to include all 77 Oklahoma counties because of drought and wildfires, and D0 expanded to cover all of the state. The moisture deficits in southwestern Missouri have lowered small ponds and stock ponds to

well below normal levels. Drought in Arkansas had brought lake levels so low that some towns were studying measures to ensure a stable water system supply. In the D2 area of central North Carolina, the city of Raleigh implemented mandatory water conservation measures. According to the USDA National Agricultural Statistics Service (NASS), planting and replanting of small grains in Texas was slow in nonirrigated areas. Range, pastures, and crops continued to decline across the Lone Star State, and many stock water ponds were dry and others were extremely low. The USDA declared several counties in northern Texas natural disaster areas; the fire danger remained high, with most counties banning outdoor burns; lakes continued to recede; and water conservation was strongly encouraged. D3 expanded near the Arklatex and D2 expanded from northeast Texas to near the Rio Grande River. Statewide reservoir capacities at the end of November were still below normal throughout all Western states (except Arizona), reflecting the area's long-term (more than 5 years) dryness and increasing demand.

Mexico: November was another month with below-normal precipitation, particularly over the northern states which typically receive a significant amount of winter rainfall associated with the passage of cold fronts and cutoff systems. The large area of below-normal precipitation in the U.S. across the Southwest to southern Plains stretched southward to cover most of the rest of Mexico. The National Water Commission (CNA) reported that virtually all of the 13 Hydrological Administration Regions received below-normal precipitation this month. The National Meteorological Service ranked November 2005 as the 6th driest November nationwide since 1941. Dam levels were below normal in the Northwest, normal in the Northeast, much below normal in Central Mexico and from normal to below normal in Southeastern Mexico. There is growing concern regarding water availability for all uses during the dry season in portions of the Lerma-Chapala and Balsas Basins (central-western México), where precipitation during the summer season was below normal and dry conditions have persisted since May.

An area of D1 moderate drought was added to northern Sinaloa and extreme southern Sonora, and AH impact indicators were added to the northwest and central west coastal D0/D1 areas to reflect both short-term as well as long-term dryness. Otherwise, few changes were made to the depiction in Mexico. Since the official forecast indicates temperatures above normal and precipitation below normal during the next three to four months, the CNA recommends caution in the use of available water especially in the Northwest and central-western Mexico.